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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

10/681,497

10/08/2003

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01/24/2008

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EXAMINER

DANIELS, MATTHEW J

ART UNIT

PAPER NUMBER

1791

MAIL DATE

DELIVERY MODE

01/24/2008

PAPER

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte STEPHEN G. BALES

Appeal 2008-0559
Application 10/681,497
Technology Center 1700

Decided: January 24, 2008

Before EDWARD C. KIMLIN, THOMAS A. WALTZ, and
KAREN M. HASTINGS, *Administrative Patent Judges*.

KIMLIN, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1-6, 8-12, 14, and 15. Claim 1 is illustrative:

1. In a method for forming lignocellulosic thermoplastic composite products such as to increase their resistance to surface visual impairment caused by mold attack, the improvement which comprises incorporating an amount of boron-containing fungicide prior to forming said composite product.

The Examiner relies upon the following references in the rejection of the appealed claims:

| | | |
|-------|--------------|---------------|
| Aida | 5,221,781 | Jun. 22, 1993 |
| Lloyd | 6,368,529 B1 | Apr. 9, 2002 |

Appellant's claimed invention is directed to a method for forming lignocellulosic thermoplastic composite products. The process entails incorporating a boron-containing fungicide into the composition prior to forming the composite product. The presence of the boron-containing fungicide increases resistance to mold attack and the surface visual impairment caused thereby.

Appealed claims 1, 4, 5, 11, 14, and 15 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Aida. Claims 2 and 3 stand rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as being unpatentable over Aida. Claims 6 and 8-12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Aida in view of Lloyd.

We have thoroughly reviewed Appellant's Principal and Reply Briefs and the Examiner's Answer in reaching our decision.

We will not sustain the Examiner's § 102 rejection of claims 1, 4, 5, 11, 14, and 15 over Aida. Aida discloses a thermoplastic resin composition that may contain an inorganic filler and/or a flame retardant. Aida discloses that the filler may be inorganic or organic, or combinations thereof, and flame retardants (col. 5, ll. 61-63). Many examples of inorganic fillers are disclosed (para. bridging cols. 5-6), while a smaller list of examples of

organic fillers is provided, most of which are lignocellulosic materials (col. 6, ll. 18-21). For flame retardants Aida discloses halogen-based materials, phosphorus-based compounds and other inorganic flame retardants (col. 6, ll. 30-33). A substantial number of inorganic flame retardants are disclosed, including zinc borate, zinc metaborate, and barium metaborate (see para. bridging cols. 6-7). Hence, it can be seen that in order to arrive at the claimed lignocellulosic thermoplastic material a number of selections from the lists of materials disclosed by Aida must be made, namely, the filler must be a combination of organic and inorganic fillers, the organic filler must be a lignocellulosic material, and the inorganic filler must be a particular flame retardant in an extensive list, specifically, one of the three listed borates among the list of inorganic flame retardants. Significantly, Aida provides no example of a composition comprising a lignocellulosic material and a boron-containing compound. Accordingly, we find that the degree of selection required to arrive at the claimed invention cannot support a finding that Aida describes the claimed subject matter within the meaning of 35 U.S.C. § 102. In our view, Aida fails to describe the claimed subject matter sufficiently to have placed a person of ordinary skill in the art in possession of the claimed invention. *In re Coker*, 463 F.2d 1344, 1348 (CCPA 1972). The judicious selection required to result in the claimed composite product from the Aida disclosure is substantial and outside the scope of a rejection under § 102. *In re Sivaramakrishnan*, 673 F.2d 1383 (CCPA 1982).

The rejection of claims 2 and 3 under § 103 over Aida is another matter. In our view, one of ordinary skill in the art, cognizant of the Aida disclosure, would have found it obvious to prepare a thermoplastic composite product comprising a lignocellulosic material and a boron-containing compound in the recited amount. As pointed out by the Examiner, Aida expressly discloses that the organic filler may be wooden powder, cellulose powder, pulp, etc. (col. 6, ll. 18-21), and Aida specifically mentions zinc borate as an example of an inorganic flame retardant. Since Aida teaches that the amount of flame retardants, such as zinc borate, can be present in an amount of 5 to 200 parts by weight of the resin (col. 7, ll. 12-15), we agree with the Examiner that Aida provides a fair teaching of employing the boron-containing compound in the claimed amount of about 2 to 12% by weight of the composite product. Although Appellant stresses that Aida does not teach that the boron-containing compound increases resistance to mold attack, it is not necessary for a finding of obviousness that a reference appreciate all the advantages of using the disclosed invention. We find that it is reasonable to conclude that the amounts of boron-containing compounds taught by Aida would also bring about resistance to mold attack.

As for the § 103 rejection of claims 6 and 8-12 over Aida in view of Lloyd, we fully concur with the Examiner that Lloyd evidences the obviousness of utilizing calcium borate in a lignocellulosic composite product for the purpose of improving resistance to fungus and insects, and

such use would necessarily result in Appellant's recited benefit of resistance to mold attack.

We note that Appellant bases no argument upon objective evidence of nonobviousness, such as unexpected results, which would serve to rebut the prima facie case of obviousness established by the Examiner.

Under the provisions of 37 C.F.R. § 41.50(b), we enter the following new ground of rejection. Claims 1, 4, 5, 11, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aida in view of Lloyd. For the reasons set forth above with respect to the § 103 rejections, we are convinced that it would have been prima facie obvious for one of ordinary skill in the art to produce a lignocellulosic thermoplastic composite by incorporating a boron-containing fungicide in the composite material with the reasonable expectation of achieving flame retardance for the product, as well as resistance to insects and fungus, as taught by Lloyd. Even though it is not necessary for a finding of obviousness that the prior art teach the additional advantage espoused by Appellant, namely, resistance to mold attack, Lloyd does explicitly teach this advantage. As noted above, Appellant has proffered no objective evidence which establishes that methods within the rather broad scope of the claims produce results that would have been considered truly unexpected to one of ordinary skill in the art.

In conclusion, based on the foregoing, the Examiner's decision is affirmed-in-part. A new ground of rejection has been entered.

1 Regarding the affirmed rejection(s), 37 C.F.R. § 41.50(b)(1) provides

"[a]ppellant may file a single request for rehearing within two months from the date of the original decision of the Board."

In addition to affirming the Examiner's rejection(s) of one or more claims, this decision contains a new ground of rejection pursuant to 37 C.F.R. § 41.50(b) (effective September 13, 2004, 69 Fed. Reg. 49960 (August 12, 2004), 1286 Off. Gaz. Pat. Office 21 (September 7, 2004)). 37 C.F.R. § 41.50(b) provides "[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review."

37 C.F.R. § 41.50(b) also provides that the appellant, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

(1) Reopen prosecution. Submit an appropriate amendment of the claims so rejected or new evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the proceeding will be remanded to the examiner. . . .

(2) Request rehearing. Request that the proceeding be reheard under § 41.52 by the Board upon the same record. . . .

Should the Appellant elect to prosecute further before the Examiner pursuant to 37 C.F.R. § 41.50(b)(1), in order to preserve the right to seek review under 35 U.S.C. §§ 141 or 145 with respect to the affirmed rejection, the effective date of the affirmance is deferred until conclusion of the prosecution before the Examiner (or, until after a request for rehearing of

the new ground) unless, as a mere incident to the limited prosecution, the affirmed rejection is overcome.

If the Appellant elects prosecution before the Examiner and this does not result in allowance of the application, abandonment or a second appeal, this case should be returned to the Board of Patent Appeals and Interferences for final action on the affirmed rejection, including any timely request for rehearing thereof.

AFFIRMED-IN-PART
37 CFR § 41.50(b)

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